Information Technology Portfolio Management Standards

Adopted by the Information Services Board (ISB) on May 20, 1999
Policy No: 101-S1
Supersedes No: N/A
Effective Date: May 20, 1999
Revision Date: April 2002

Also See: 100-P1, 300-P1, 301-G1, 400-P1, 401-S1, 500-P1, 501-S1

Definitions

Table of Contents

Introduction

The information technology (IT) portfolio is a tool for making better decisions about your agency's investment in computers, computer software, networks, staff, and supporting facilities. In effect, it is a summary containing the essential information required for effective executive management and oversight of technology within the agency. It does not replace the agency's existing technology management structure, although it will simplify the sharing of management information within the agency and between agencies. It should be presented in a manner that highlights the most important information in the portfolio from a management perspective.

The portfolio contains essential information about the agency's use of IT. Its focus is on the relationships between IT and agency mission and programs. The portfolio includes information about business strategies, operational systems, potential investments, development projects, and technical standards and capabilities.

Portfolio Severity & Risk Assessment

The IT portfolio serves both external and internal constituents. To maximize its value, it should include IT investments (current and proposed) that are important to the agency. Importance can be measured a number of ways, all of which should be considered in evaluating potential entries. Agencies should be mindful of mission criticality; cost and budgetary implications; impact on citizens; visibility to the public and Legislature; impact on state operations; organizational readiness (capability); organizational impact; level of development effort; and nature of the technology (new vs. mature).

Agencies should evaluate potential portfolio entries against the criteria set out in the severity and risk matrices found in Appendix A of this document. Generally, any project, investment, acquisition, or asset ranking high in any matrix category should be included in an agency portfolio. Similarly, any such project, investment, acquisition or asset with a number of medium rankings should also be considered for inclusion. Information about Internet-based transactional applications, including but not limited to e-commerce, as required by the IT Security Policy and Standards at http://www.dis.wa.gov/portfolio/, is also included in the portfolio.

Projects, investments, acquisitions and assets should be prioritized for entry in the portfolio, beginning with the most important initiatives. Projects with equal importance may be clustered if necessary, and the clusters ranked.

Submitting Copy of Portfolio

A copy of the completed agency IT portfolio (Sections 1 through 6), together with updates as needed and/or required, is submitted to the Department of Information Services (DIS).

DIS encourages the submission of portfolios in electronic format (e.g. Microsoft Word or hyper text markup language (html)) that support hyperlinks to supporting documents. As a default, DIS accepts paper-based or hard copy submissions of agency portfolios. DIS encourages agencies to include links to any supporting documentation that is available online. Links should include full Uniform Resource Locator (URL).

To facilitate ready access and updates, submitted portfolios may be posted by the originating agency on the state intranet. Contact your DIS Senior Technology Management Consultant to confirm acceptable electronic formats prior to developing your submission and to coordinate posting to the intranet.

Annual Portfolio Update Certification

Per the IT Portfolio Management Policy, agencies must conduct an annual update of their IT portfolios in conjunction with the agency planning and budget processes, and make whatever revisions are necessary for the portfolio to continue to reflect the agency's management and use of IT.

Pursuant to RCW 43.105.017(3), agency heads are responsible for the oversight of their respective agency's management and use of IT resources. An annual portfolio update confirmation letter must be included in Section 6 of the agency IT portfolio and submitted to the Information Services Board (ISB). The confirmation letter indicates completion of the annual review and update of the agency portfolio. The head of each agency must provide certification to the ISB by August 31 of each year that the annual IT portfolio update has been completed.

Statutory Authority

The provisions of RCW 43.105.041 detail the powers and duties of the ISB, including the authority to develop statewide or interagency information services and technical policies, standards and procedures.

Scope

These standards apply to all executive and judicial branch agencies and educational institutions, as provided by law, that operate, manage, or use IT services or equipment to support critical state business functions.

Exemptions

None.

Standards

Given the wide audience for the portfolio document, it should be written in a clear, compelling, non-technical manner. The baseline portfolio contains six sections:

Section 1: Agency Portfolio Overview
Section 2: Agency Strategic Business Plan
Section 3: Agency Technology Infrastructure
Section 4: Technology Investment/Project Summaries
Section 5: Planned Investments/Projects
Section 6: Annual Technology Investment and Project Reviews

The sections that comprise an agency's IT portfolio are described in the following pages. The required content of each section represents the minimum standard core of information that must be included in each agency's portfolio. Agency executives may choose to include additional information at their discretion. A brief description of each section follows. For further detail see the appendices.

Section 1: Agency Portfolio Overview

The Agency Portfolio Overview provides a high level description and analysis of the agency IT portfolio. The portfolio overview addresses the following topics: portfolio support of the agency's mission; summary of IT plans, proposals, and acquisition process; an enterprise view of information technology infrastructure; IT challenges and opportunities faced by the agency; high-level view of current and future IT investments; and a description of the agency's prioritization process for selecting IT projects. (see Appendix B for Section 1 details)

Section 2: Agency Strategic Business Plan

The Agency Strategic Business Plan section of the portfolio helps ensure that current and proposed technology investments are aligned with the agency's vision for the future and directly support its business processes. This section has the same content and format as the strategic business planning material required in conjunction with the budget process. It has been included in the IT portfolio to help strengthen the bond between the agency's use of technology and its mission, strategies, and business processes. The summary information included in this section duplicates the information that each agency must currently provide in conjunction with its biennial budget proposals.

Section 2 of the portfolio is prepared in accordance with the biennial budget instruction issued by the Office of Financial Management (OFM). A copy of, or hyperlink to, that submittal will suffice to provide the data required in this section. **Note: Agencies with separately elected officials are not required to prepare a Strategic Business Plan.**

Section 3: Agency Technology Infrastructure

Section 3 defines the current inventory of systems, defines their functionality, describes the architecture and provides the core of IT capacity in the current period. It also addresses operating environment requirements including planning related to IT security and disaster recovery and business resumption.

An agency's technical infrastructure is a platform for future technology investments and a constraint limiting the investments that can be cost-effectively pursued. This section of the portfolio provides a convenient reference for executives engaged in planning and managing their agency's use of IT.

In addition to providing the infrastructure information described above, Section 3 includes an inventory of specific components in the agency's IT infrastructure. Portions of Section 3 must be submitted electronically to DIS. The requirements for completing the inventory section are itemized in Appendix C.

Section 4: Technology Investment/Project Summaries

Section 4 is based on documentation that is routinely required for effective project management. The information included in the Technology Investment/Project

Summaries section is a summary of key information extracted from project documentation, including but not limited to project feasibility study reports, and project quality assurance plans.

Project managers are responsible for the project itself and for related documentation. Such documentation -- feasibility studies, investment plans, implementation plans, project plans, risk assessment and mitigation plans, quality assurance (QA) plans and project status reports, as appropriate -- are included in agency portfolios by reference. Agencies are not required to submit them with the portfolio. The portfolio model assumes that projects, investments, acquisitions and assets have current documentation available and accessible for use by agency executives, IT personnel, QA professionals and those acting on behalf of the ISB. This section also provides the opportunity to document formal project acceptance by key stakeholders.

The Technology Investment/Project Summaries section is comprised of a summary analyses of each current project and technology investment, including when applicable, information about web-based transactional applications, as required by the IT Security Policy and Standards at http://www.dis.wa.gov/portfolio.

The requirements for completing this section are itemized in Appendix D. Agencies may respond to the requirements in tabular form or through brief narratives, as appropriate.

Section 5: Planned Investments/Projects

Section 5 provides an opportunity for agency executives to view IT investment alternatives in context, rather than as isolated projects. The contents of the portfolio are drawn from documents that have already been created by each agency in conjunction with its regular management processes.

Each investment in IT must be viewed in relation to:

- Its impact on the business of the agency - as represented by the Agency Strategic Business Plan section of the portfolio;
- Its impact on the agency's technical environment - the Agency Technical Infrastructure;
- Its priority as measured against current investments and other proposed investments - Sections 4 and 5 of the portfolio; and
- The impact, if any, on the statewide IT infrastructure.

The Planned Projects/Investments section is comprised of a summary analyses of each project and proposed technology investment, including when applicable, information about web-based transactional applications, as required by the IT Security Policy and Standards at http://www.dis.wa.gov/portfolio

The requirements for completing this section are itemized in Appendix E. Agencies may respond to the requirements in tabular form or through brief narratives, as appropriate.

Section 6: Annual Technology Investment and Project Reviews

Section 6 consists of a review and update of each ongoing level 2 and 3 investment or project, and a post-implementation review of any level 2 or 3 investment or project completed since the previous annual update. Section 6 can also be considered the historical portion of the portfolio, and is the logical section for storing copies of the required annual portfolio, security and disaster recovery certification letter(s) from the agency head.

The project review of each ongoing level 2 and 3 investment or project is performed as part of the annual update of the IT portfolio. The purpose of the review is to compare expectations for the investment or project as documented in the original investment analysis and project plan, and compare the assessment of project risk against the actual course and results of the project. The review should also reflect the status of the project(s) prior to undertaking the annual portfolio update.

For projects that have completed since the last annual portfolio update, the agency must include a post-implementation review. The review should assess the causes and impacts of any significant reductions in benefits, increases in one-time or continuing costs, problems with project management, or increases in project risk during the course of the project. It must document practices and procedures that lead to project successes and make recommendations for applying them to similar future projects, and make recommendations for improving the planning, management, and quality control of future, similar investments or projects.

In addition to documenting the post-implementation reviews in Section 6, the results of the project review should be reflected as updated investment and project information in Section 4 of the portfolio. Section 4 of the portfolio must be updated to show: the current status of the project, actual project costs and benefits, and a reevaluation of the risk level of the project. The review should also be maintained with the project records and a copy should be submitted to DIS or the ISB on request or if required to do so in the approved project plan.

The appropriate sections of the portfolio must be updated to show any change in the scope of the investment and/or revised costs and benefits over the expected life of the IT asset resulting from the project.

The requirements for completing the post implementation reviews are itemized in Appendix F.

Maintenance

Technological advances and changes in the business requirements of agencies will necessitate periodic revisions to policies, standards, and guidelines. The Department of Information Services is responsible for routine maintenance of these to keep them current. Major policy changes will require the approval of the ISB.

Appendix A - Severity & Risk Level Criteria and Oversight

Severity is rated on four categories: impact on citizens, visibility to the public and Legislature, impact on state operations, and the consequences of doing nothing. The risk criteria measure the impact of the project on the organization, the effort needed to complete the project, the stability of the proposed technology, and the agency preparedness.

The risk and severity criteria summarized in the following pages are general guidelines for assessing IT projects and are not intended to be exhaustive.

How to use the Severity and Risk Matrix

In general, the highest level evaluation in a category determines the severity or risk level for that category. For example, a project or investment that meets one or more of the criteria (bulleted items) within the "high" category results in a high rating for that category, even though it may also meet several in the medium or low categories.

Severity and Risk Level assessments should be conducted with your DIS Senior Technology Management Consultant.

Severity Level Criteria

The severity matrix assesses the proposed project's impact on citizens and state operations, its visibility to stakeholders, and the consequences of project failure.

	Categories			
Levels	**Impact on Clients**	**Visibility**	**Impact on State Operations**	**Failure or Nil Consequences**
High	• Direct contact with citizens, political subdivisions, and service providers – including benefits payments and transactions.	• Highly visible to public, trading partners, political subdivisions and Legislature. • Likely subject to hearings. • System processes sensitive / confidential data (e.g. medical, SSN, credit card #'s).	• Statewide or multiple agency involvement / impact. • Initial mainframe acquisitions or network acquisitions.	• Inability to meet legislative mandate or agency mission. • Loss of significant federal funding.
Medium	• Indirect impacts on citizens through management systems that support decisions that are viewed as important by the public. • Access by citizens for information and research purposes.	• Some visibility to the Legislature, trading partners, or public the system / program supports. • May be subject to legislative hearing.	• Multiple divisions or programs within agency.	• Potential failure of aging systems.
Low	• Agency operations only.	• Internal agency only.	• Single division. • Improve or expand existing networks or mainframes with similar technology.	• Loss of opportunity for improved service delivery or efficiency. • Failure to resolve customer service complaints or requests.

Risk Level Criteria

The risk matrix measures the impact of the project on the organization, the effort needed to complete the project, the stability of the proposed technology, and agency preparedness.

	Categories			
Levels	**Functional Impact on Business Processes or Rules**	**Development Effort & Resources**	**Technology**	**Capability & Management**
High	• Significant change to business rules. • Replacement of a mission critical system. • Multiple organizations involved. • Requires extensive and substantial job training for work groups.	• Over $5 million. • Development and implementation exceeds 24 months.* • Requires a second decision package. * Clock starts after feasibility study or project approval and release of funding.	• Emerging. • Unproven. • Two or more of the following are new for agency technology staff or integrator, or are new to the agency architecture: programming language; operating systems; database products; development tools; data communications technology. • Requires PKI certificate. • Complex architecture – greater than 2 tier.	• Minimal executive sponsorship. • Agency uses ad-hoc processes. • Agency and/or vendor track record suggests inability to mitigate risk on project requiring a given level of development effort.
Medium	• Moderate change to business rules. • Major enhancement or moderate change of mission critical system. • Medium complexity business process(es). • Requires moderate job training.	• Under $5 million but over agency delegated authority. • 12 to 24 months for development and implementation. ***** ***** Clock starts after feasibility study or project approval and release of funding.	• New in agency with 3rd party expertise and knowledge transfer. • One of the technologies listed above is new for agency development staff.	• Executive sponsor knowledgeable but not actively engaged. • System integrator under contract with agency technical participation. • Agency and/or vendor record indicates good level of success but without the structure for repeatability.

	Categories			
Levels	**Functional Impact on Business Processes or Rules**	**Development Effort & Resources**	**Technology**	**Capability & Management**
Low	• Insignificant or no change to business rules. • Low complexity business process(es). • Some job training could be required.	• Within agency delegated authority. • Under 12 months for development and implementation.***** ***** Clock starts after feasibility study or project approval and release of funding.	• Standard, proven agency technology.	• Strong executive sponsorship. • Agency and vendor have strong ability to mitigate risk on a development project. • Project staff uses documented and repeatable processes for tracking status, problems, and change. • Agency or vendor is CMM Level 3 equivalent or above.

Project Approval and Oversight Matrix

The level of approval and oversight required on a given project is determined through an assessment of project risk and severity:

High Severity	**Level 2**	**Level 2**	**Level 3**
Medium Severity	**Level 1**	**Level 2**	**Level 2**
Low Severity	**Level 1**	**Level 1**	**Level 1**
	Low Risk	***Medium Risk***	***High Risk***

Level 2 projects may require ISB approval and oversight.

Oversight Definition

Level 1: Investments at this level are overseen by agency management and staff according to the IT policies, procedures, and practices of that agency, consistent with ISB IT investment policies and standards. It is at the agency's discretion whether to invite the DIS MOST consultant to key meetings, whether to provide the consultant with written reports, and whether to include a Level 1 project in the agency's portfolio.

NOTE: Level 1 investments subject to section 902 of the state's biennial budget are treated as Level 3s.

Level 2: DIS oversight of investments at this level is performed by DIS MOST staff, as appropriate. The specific activities required of an agency and the extent of DIS MOST staff involvement under Level 2 oversight are determined collaboratively between the two parties. These typically depend on several factors, including, but not limited to: the experience of the agency with similar investments; the effect of legislative or public opinion in the event of negative media coverage; the interest of specific ISB members (e.g., effect on an ISB legislative member's district); essentially, the criteria contained in the severity/risk matrix.

For all Level 2 investments, the agency shall develop the appropriate type and quality of project management documentation and materials commensurate with the project's severity and risk. Should the agency and DIS MOST staff determine that the project requires DIS oversight, at a minimum, the agency shall provide copies of the project status reports, and key project documents and materials to its MOST consultant and invite the consultant to attend all steering committee and key project status meetings. The agency shall include all Level 2 investments in its IT portfolio, whether or not the projects are under DIS oversight.

NOTE: Level 2 investments subject to section 902 of the state's biennial budget are treated as Level 3s..

Level 3: Investments at this level are subject to full ISB oversight, which includes DIS MOST staff written reports to the ISB, periodic status reports to the ISB by the agency director and staff, and submission of other reports as directed by the ISB.

At this level, the agency shall provide copies of key project documents, including the feasibility study, project external quality assurance reports, project management plans, risk management plans, change management plans, and closeout and evaluation reports to its MOST consultant as staff to the Board. The consultant participates in all steering committee and project status meetings. The agency shall include all Level 3 investments in its IT portfolio.

Oversight Levels

Having determined the risk and severity associated with a proposed project, it will be assigned the appropriate level of approval and oversight with the following general requirements.

	Justification & Approval Decision	Feasibility Study and Project Management Approach/Execution	Oversight
Level 3	• Agency director approval. • DIS executive review and comment. • ISB approval.	• Agency presents feasibility study to ISB. • Prototype required at discretion of ISB. • Private sector participation encouraged or required.	• ISB oversight required. • External QA required. • ISB audit as necessary. • Other ISB discretionary actions as needed. • Reported as part of portfolio.

	Justification & Approval Decision	Feasibility Study and Project Management Approach/Execution	Oversight
Level 2	• Agency executive approval. • DIS Director review and approval.	• Agency executive approval. • DIS consultation.	• Internal or external QA at agency discretion. • DIS and agency determine oversight required • ISB oversight optional. • Reported as part of portfolio.
Level 1	• Agency executive approval with option of DIS consultation.	• Agency-defined methods.	• Internal QA at agency determination. • Agency may report project as part of portfolio.

Requirements at Different Levels of Oversight

	Level 1	Level 2	Level 3
Feasibility Study	Agency discretion	Recommended	Required
Approval Level	Agency Internal	DIS Director (may recommend full ISB oversight)	ISB
Investment Plan	Recommended	Required	Required
Quality Assurance	Agency discretion	Internal or external (agency discretion)	External required
In Portfolio	Agency discretion	Required	Required
Oversight	Agency discretion	Level of MOSTD staff involvement dependent on project and consultation with agency	ISB
Project Reporting and Status	Agency discretion	Agency provides copies of key written reports to MOSTD staff	MOSTD staff provides written reports to ISB. Agency sponsor and staff provide periodic status reports to ISB
Key Meeting Participation by MOSTD Staff	Agency discretion	MOSTD staff invited to steering committee and project status meetings	MOSTD staff participates in steering committee and key project status meetings

Appendix B - Section 1 Detail - Agency Portfolio Overview

Section 1: Agency Portfolio Overview

A. Purpose

Describe the purpose or value of the portfolio to your executive management in managing IT as a vital agency resource.

B. Convergence of Business Mission and IT Vision

[Links IT to the strategic business plan in Section 2.]

Describe your agency's mission and its primary business objectives. What business is your agency in? What legislative mandates does your agency have? What is your agency's vision to accomplish its mission? How well do your current IT investments support the business objectives? How important is IT in helping you meet your agency's business goals? What future investments or changes in investment strategy need to be made (if any) in order to strengthen IT support of the agency's mission?

C. IT Plans, Proposals, and Acquisitions Process

The agency should describe the following:

1. The process for reviewing its IT plans, proposals, and acquisitions from a financial and management perspective as part of the budget process.
2. Its acquisition process and how the process provides competition and accountability for purchases and expenditures and adheres to the provisions of the Information Technology Investment Policy.
3. Awareness and adherence to state technical standards for IT, and any exceptions to or deviations from the standards.
4. Awareness and adherence to state complaint and protest procedures as outlined in the IT Investment Policy and Standards documents.

D. Overview of Infrastructure

[High level view of data from Sections 3 and 4 of portfolio combined with a summary of staff resources.]

Provide a high level, enterprise-wide view of the current IT investment (hardware, software, networks, and critical applications), and the schematic of IT structures (locations/nodes, physical facilities, networks, etc.). Who is doing the work (number of people, Full-Time Equivalents, etc.) and how (copy of IT organizational chart – centralized vs. decentralized)?

E. Analysis

[Use data from Sections 3 and 4.]

Describe as a percentage (and/or represent graphically) current and projected allocation of resources by category or functional unit. Examples: application development, infrastructure development, major systems, maintenance costs, and/or

functional distinctions that reflect the agency's structure and business model. The term "resources" includes labor, contractual services, infrastructure, and overhead, measured in dollars.

F. Challenges and Opportunities

Given the state of technology used by agencies today, what challenges does your agency face? What does your agency need to succeed? Are there opportunities for data or resource sharing that could be explored? How can your agency contribute to achieving the state's IT plan?

G. Solutions: Current and Future IT Investments

[Narrative overview of Section 4 and 5, tied back to Section 2.]

In addressing this subject, consider the following: How can your agency apply IT to achieve its business objectives now and in the future? What does success look like? How will the challenges be addressed? Provide an overview of current "In-development" projects (number and nature). Describe planned projects in terms of: a) meeting business objectives; b) impact on existing investments (changes to applications, networks, etc.); c) consistency with state's IT strategic plan; and d) priority of project or cluster of projects, and justification of this priority.

H. Prioritization Process

Describe your agency's management process for prioritizing IT resources.

Appendix C - Section 3 Detail - Agency Technology Infrastructure

The information described in the following sub-sections **must** be provided to DIS using the web ePortfolio application.

Section 3
A. Current and Projected IT Budget
B. IT Personnel
C. Personal and Workgroup Computing
D. Geographic Information Systems (GIS) Resources

For access to and assistance in using the web application, contact your agency's DIS Senior Technology Management Consultant.

A. Current and Projected IT Budget

IT expenses should reflect the entire agency, not just the IT division.

Provide budget details in the following categories (Descriptions of each category are included below):

Reporting Period	**Total Agency IT Budget**	**Hardware Purchase and/or Lease**	**Software Purchase and/or Lease**	**H/W Repairs and Maintenance**	**S/W Enhancements and Maintenance**
Indicate Current Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)
Indicate Current Fiscal Year	(Actuals)	(Actuals)	(Actuals)	(Actuals)	(Actuals)
Indicate Next Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)

Reporting Period	**Telecommunications**	**Data Processing Services (e.g. DIS services)**	**If applicable, list & identify other major IT expenses here**
Indicate Current Fiscal Year	(Projected)	(Projected)	(Projected)
Indicated Current Fiscal Year	(Actuals)	(Actuals)	(Actuals)
Indicated Next Fiscal Year	(Projected)	(Projected)	(Projected)

B. IT Personnel

Reporting Period	**Total Agency IT FTEs (include WMS positions)**	**Salaries and Benefits**	**Personal and Purchased Services**	**Professional Development of IT Staff**
Indicate Current Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)
Indicate Current Fiscal Year	(Actuals)	(Actuals)	(Actuals)	(Actuals)
Next Fiscal Year	(Projected)	(Projected)	(Projected)	(Projected)

Category Descriptions

Hardware purchase and/or lease - Purchase or lease payments for machines, devices, and transmission facilities used in information processing, such as servers, routers, personal computers, laptops, terminals, personal digital assistants, printers, and cables. Do not include multi-purpose machines that are predominately used as copiers.

Software purchase and/or lease - Purchase or lease payments for the object code version of computer programs and any related documentation, and/or licenses for use of software products (e.g. Microsoft Select Agreement). Software also means the source code version, where provided by vendor.

Hardware repairs and maintenance - Payments made to external providers for repairs, preventive maintenance, and/or support for hardware.

Software enhancements and maintenance - Payments made to external providers for enhancements, maintenance, and/or support for software.

Telecommunications - Telecommunications services and equipment for voice, including telephones and local service (e.g. Centrex, PBX, voice mail, IVR) and long distance (SCAN, 800 number), wireless (cellular phones, pagers); videoconferencing services and equipment; and telecommunications services and equipment for data (e.g. modems, routers, gateways, transport, Internet).

Data processing/information technology services - Payments made to a third party (e.g. DIS) for services that assist the agency in the electronic capture, collection, storage, manipulation, transmission, retrieval, presentation, and distribution of

information in the form of data, text, or image, and/or facilities management of agency equipment.

Other - IT resources or special projects that may not be captured in the categories listed here.

Agency IT FTE - Total number of staff in IT job classifications. Include other staff (e.g. WMS) whose responsibilities are mostly IT-related.

Salaries and benefits - Total salaries and benefits for agency IT FTEs.

Personal and Purchased Services - Personal Services are professional or other technical expertise provided by a consultant to accomplish a specific study, project, task, or other work statement. Purchased Services are provided by a vendor to accomplish routine, continuing, and necessary functions such as data entry, scanning and indexing, programming services and analysis. Do not include hardware and software repairs and maintenance in this category.

Technical and professional development of IT staff - Tuition/fees, travel, per diem, and materials for classes, seminars, conferences, and online courses that contribute to the development of agency IT personnel.

C. Personal and Workgroup Computing

Provide details in the following categories (Descriptions of each category are included below):

Indicate the fiscal year being reported: FY_____

Personal Computers

1. Total Agency FTEs	2. Total number of PCs (exclude servers)	3. Planned number of PCs replacements next fiscal year	4. Agency intended refresh cycle in months	5. PCs donated to schools in last 12 months

Servers

6. Total number of servers	7. Number of servers to be replaced next fiscal year	8. Number of servers planned to be added in next fiscal year	9. Factors driving server acquisition strategy

Network Connectivity	
10. % agency staff with Inside WA (intranet) access	11. Agency primary network operating system
Desktop Office Suite	
12. Primary desktop office product suite?	13. If not XML enabled do you plan to be within 12 months? (yes/no)

Category Descriptions

Personal Computers

1. What is the total agency FTE count?
2. How many personal computers (PCs) does the agency currently have (excluding servers)?
3. How many of these PCs does the agency plan on replacing in the next fiscal year?
4. If your agency has an established PC refresh cycle, what is the length of that cycle?
5. If your agency donates used PCs to schools, approximately how many were donated in the past 12 months?

Servers

6. How many servers does your agency currently lease or own?
7. How many of these current servers do you plan on replacing during the next fiscal year?
8. How many additional servers do you plan to purchase or lease during the next fiscal year?
9. Which of the following are driving your server acquisition strategy? (pick one or more)

- Server consolidation
- Increased application utilization
- New application deployment
- Disaster Recovery/Redundancy
- Other

Networks

10. What percent of agency staff have access to the state intranet portal (Inside WA)?
11. What is your agency's primary network operating system?

Desktop Office Suite

12. What office product suite does your agency use as its primary desktop tool?
13. If desktop office suite is not XML enabled, do you plan on migrating to a version that is within the coming biennium? (yes/no)

D.: Geographic Information Systems (GIS) Resources

Provide details in the following categories (Descriptions of each category are included below):

Indicate the fiscal year being reported: FY_____

	1. Number of GIS Staff (FTEs)	Indicate here if included in 3.B.1 "Total Agency IT FTEs"
Central Support		(yes/no)
Program Area Support		(yes/no)

	2. GIS Software
Vendor Name	
Product Name	
Number of Licenses	

	3. Hardware
Make/Model	
How Many	
Is this equipment included in Section 3C.2 "Total Number of PCs?	(yes/no)
Is this equipment included in Section 3C.6 "Total Number of Servers?	(yes/no)

	4. Major GIS Application(s)
Application Name / Description	

	5. GIS Database(s) Environment
Vendor Name	
Number of applications	

	6. Critical GIS Datasets
Name(s)	

Category Descriptions

Many agencies have a significant investment in GIS technology or rely on the technology to meet mission critical information requirements. If your agency uses GIS in this context, please respond to the following.

1. GIS Staffing (FTEs) - (Please indicate if these FTEs are reflected in Section 3.B.1 "Total Agency IT FTEs")
   - Centralized support - indicate FTEs currently devoted to a corporate or centralized GIS support effort.
   - Program area support - indicate FTEs currently attached to program areas for GIS support.
2. Software - identify GIS software packages and number of licenses currently maintained for each.
3. Hardware - identify hardware platforms used to support GIS.
4. Major applications - identify and provide brief description of major/mission critical GIS applications.
5. GIS Database Environment - identify vendor databases (e.g. ARC SDE, Oracle, etc.) used to support mission critical GIS effort and indicate number of GIS application supported by each database.
6. Critical GIS Datasets - identify GIS datasets that are critical to support of agency's mission.

The information described in the following sub-sections is **not** provided to DIS using the web ePortfolio application. Section 3:

E. Security and Disaster Recovery/Business Resumption Plans
F. Public Access
G. Application (Systems) Information
H. Database Information

E. Security and Disaster Recovery/Business Resumption Plans

Agency heads are responsible for the oversight of their respective agency's Information Technology (IT) security and disaster recovery and will confirm in writing that the agency is in compliance with the IT Security and Disaster Recovery/Business Resumption Policies and Standards.

- Security - The annual security verification letter due August 31 per the IT Security Policy and Standards must be included in Section 6 of the agency IT portfolio and submitted to the Information Services Board. The verification indicates review and acceptance of agency security processes, procedures and practices, as well as updates to them since the last review.
- Disaster Recovery/Business Resumption - The annual disaster recovery/business resumption verification letter due August 31 must be included in Section 6 of the agency IT portfolio and submitted to the Information Services Board. The verification indicates review and acceptance of agency disaster recovery/business resumption processes, procedures, and practices as well as updates to them since the last review.

These certification letters may be submitted as one document.

The Security Program and Disaster Recovery/Business Resumption Plans are included in the portfolio by reference. Agencies are not required to submit them to DIS. Instead, agencies will indicate the physical location of the unique authoritative copies of the plans and indicate contact information for the steward of those plans (and stipulate that they were developed/ maintained in accordance with published ISB policy.)

F. Public Access

Describe the agency's "progress toward [providing] electronic access to public information and enabling citizens to have two-way interaction … for obtaining information and services…" (RCW 43.105.270).

G. Application (Systems) Information

This section is useful in providing information about the production applications existing at an agency. For the purpose of the portfolio, an application or system is a group of related automated procedures that support a business objective.

In this section, provide information for each mission critical IT application.

Mission critical applications are high risk application systems. With a mission critical application, even short-term loss of the functionality provided by the application would have significant negative impact on:

- The health or safety of the public or state workers;
- Income maintenance for citizens or government employees;

- Payments to vendors for goods and services; or
- The legal or fiscal integrity of state operations.

In addition to mission critical applications, agencies are encouraged to include information in their portfolios about any application deemed important to the agency or to other stakeholders. Agencies are also encouraged to include supplemental information in their portfolios if useful for managing or reporting.

The following list, while not exhaustive nor mandatory, is encouraged. Agencies may indicate in their portfolios if they do not currently capture an element listed below:

1. Provide name of application.
2. Provide name and title of application owner (e.g. IS Mgr./owner).
3. Provide name and title of customer/business area owner.
4. Indicate type of application (accounting, human resource, program or agency specific such as claims management, tax collection, etc.)
5. Provide a brief description of the application.
6. Provide an estimate of the number of users.
7. Indicate which agency strategies, programs, and business processes are supported by the application.
8. Indicate when the application was originally implemented.
9. If the application has been significantly modified, indicate when.
10. Indicate how many technical staff FTEs are required to maintain and support the application.
11. Indicate if replacement or major modification of the application is planned. If so, briefly describe the modification and indicate its planned start date.
12. Indicate ownership of application (owned by agency, leased from vendor, owned and operated by vendor)
13. Provide application size and technical characteristics (number of lines of code or function points, primary technology platform, site of platform (agency, DIS, etc.), operating system, primary language (COBOL, Natural, etc.), and database management system used.
14. List interfaces to other major systems.

It is important for executive management of the agency to understand the current application portfolio in order to manage current activities and plan for the future. Agencies are encouraged to use the application information to assist with the management of IT.

Suggested summary reports to include in the portfolio include:

- Statistics comparing applications from year to year
- Age of applications

- Commercial applications supported
- Number of platforms used by applications
- Operating systems in use
- Languages used by applications
- Database types used
- Applications by customer/business area
- Applications by manager/owner
- Number of FTEs providing maintenance and support
- Estimated cost of maintenance & support

H. Database Information

The purpose of this section is to provide information about existing databases in the agency. Provide the following information for each mission critical database.

Mission critical databases support high risk application systems. With a mission critical database, even short-term loss of the functionality provided by the application and database would have significant negative impact on:

- The health or safety of the public or state workers;
- Income maintenance for citizens or government employees,
- Payments to vendors for goods and services; or
- The legal or fiscal integrity of state operations.

In addition to mission critical databases, agencies are encouraged to include information in their portfolios about any database deemed important to the agency or to other stakeholders. Agencies are also encouraged to include supplemental information in their portfolios if useful for managing or reporting. The following list, while not exhaustive nor mandatory, is encouraged. Agencies may indicate in their portfolios if they do not currently capture an element listed below.

1. Database commercial name (DB2, ADABAS, Oracle, etc.)
2. List of applications supported
3. High-level description (what type of data does it collect)
4. Location (Agency, DIS, vendor facility)
5. Ownership of database (e.g. IS Mgr./owner).
6. Size of database in terms of data storage requirements
7. Number of records in the database
8. Frequency with which records are added, modified, and deleted
9. Backup frequency

It is important for executive management of the agency to understand the current database portfolio in order to manage current activities and plan for the future. Agencies are encouraged to use the database information to assist with the management of IT. Suggested summary reports to include in the portfolio include:

- Statistics comparing databases from year to year
- Age of databases
- Number of platforms
- Database by manager/owner
- Number of FTEs providing maintenance and support
- Estimated cost of maintenance & support

Appendix D - Section 4 Detail - Technology Investment/Project Summaries

Provide a summary of each current technology investment.

Title	Description/Purpose	Cost Estimate	FTEs	Schedule	Scope	Business Driver/Strategy Supported	Executive Sponsor	Project Manager
Project, investment, acquisition name (ranked by priority)	A brief, non-technical description of the purpose of the project, application or asset.	Total project costs including development and implementation, by phase as appropriate	Include both state and contractors, reported separately.	Start and completion dates, by phase, as appropriate.	Organizational context (work group, agency-wide, statewide). Related functional areas outside the project scope. Risk (low, medium, high). Impact on, or relationship to, statewide infrastructure.	Major business functions or processes supported. Measurable benefits (and/or mandated by statute. Cite RCW).	Name Title Phone E-mail	Name Title Phone E-mail

Appendix E - Section 5 Detail - Planned Investments/Projects

Provide a summary of each planned or proposed technology investment.

Title	Description/ Purpose	Cost Estimate	FTEs	Schedule	Impact on existing investments	Scope	Business Driver/ Strategy Supported	Executive Sponsor	Project Manager
Project, investment, acquisition name (ranked by priority).	A brief, non-technical description of the purpose of the project, application or asset.	Total project costs including development and implementation, by phase as appropriate	Include both state and contractors, reported separately.	Start and completion dates, by phase, as appropriate.	Changes to agency applications, and systems. Impact on, or relationship to, statewide infrastructure.	Organizational context (work group, agency-wide, statewide). Related functional areas outside the project scope. Risk (low, medium, high).	Major business functions or processes supported. The measurable results that will be achieved as a result of completing this project (and/or mandated by statute. Cite RCW). Summary of tangible and intangible benefits for the project.	Name Title Phone E-mail	Name Title Phone E-mail

Appendix F - Section 6 Detail - Annual Technology Investment and Project Reviews

Post Implementation Review

The post implementation review should assess the causes and impacts of any significant reductions in benefits, increases in one-time or continuing costs, problems with project management, or increases in project risk during the course of the project. It must document practices and procedures that lead to project successes and make recommendations for applying them to similar future projects, and make recommendations for improving the planning, management, and quality control of future, similar investments or projects.

1. Purpose

The major purpose of a Post Implementation Review (PIR) is to determine if the expectations established for an information technology system were met. The PIR essentially documents the comparison between the *actual* results of a system and the *estimates* contained in the acquisition plan or project agreement. It also establishes a baseline for similar acquisitions or projects to assist in shaping more accurate estimates for future information technology planning so that state agencies can benefit from experience. Ideally, the PIR should be conducted by an objective third party such as a private contractor, the State Auditor's Office, internal auditor, or other neutral party.

2. Scope

The PIR complements previous project documentation. It is not a requirement to provide the level of detail which may be found in the agency's project definitions, decisions packages, conceptual/detailed design, and feasibility study. What is sufficient – and necessary – is the level of detail that will enable meaningful analysis of events, and conclusions to be drawn regarding those events.

The comparisons of interest in a PIR are:

- Estimated and actual schedule;
- Estimated and actual costs;
- Expected and actual functionality;
- Projected and actual benefits.

3. Guidance

It is vital that the PIR include what is perceived to have occurred, and why. However, it is recognized that not all events are explainable in terms of measurable "cause and effect" rationale, yet there may be "lessons learned" in the perception of events even though the "measurement" cannot be ascertained. Also, there can be valid reasons why costs – for example – have increased, such as an expansion of the system's original functional requirements or an increase in technical staffing.

"Knowns" (e.g., acquisition costs, personnel, schedule) are traditionally tracked because the information is available. However, a particular project's "unknowns" (during development) can create implementation risks, and it is these unknowns which can in hindsight offer valuable lessons for project lifecycle planning (e.g., additional functionality added, training, maintenance of new code, unforeseen additional personnel or technical skills needed.)

In addition to a value expressing differences such as "cost was X dollars over estimates," it is also useful to express differences in terms of percentages when comparing estimates with actuals since it lends insight into the project's complexity. For example, a greater percent difference – 10% above cost estimates – may be more acceptable for an innovative, higher-risk project than for a project with lower risk since the latter should have less uncertainty in performance information. The following are some points to consider when addressing schedule, costs, functionality, and benefits of the completed project.

a) Schedule: The PIR should describe the original and actual milestones, deliverables, products, or processes effected and the reasons for any significant differences. For example, the trade-off between elapsed time and the desire for rigorous functional requirements could affect critical paths and thus, delivery dates. If a project missed a schedule by two months, this information by itself is not sufficient for the PIR. Since a task that takes longer sometimes results in a better system, schedule aspects of the PIR must make clear whether schedule changes were due to engineering necessity, uncertainty, assumptions during estimation, or other reasons.

b) Costs: Project costs should be categorized to illustrate whether savings or overruns occurred as a result of software design, hardware changes, additional personnel, or other combination of factors. For example, the estimated (original) cost may be lower than the actual cost because the estimate did not include subsequent changes to the specifications. Or a particular technology did not turn out to be as mature as anticipated requiring other hardware or software solutions. What is important is to capture the reasons for differences between the estimated and actual costs, and what the specific cost categories were that contributed to the differences.

c) Functionality: The comparison between expected and actual functionality essentially addresses project technical feasibility in two ways: (a) does it meet specification, and (b) does it work satisfactorily?

Technical specifications are addressed via requirements analysis (during the project life cycle), and may be derived from agency, state, federal, and industry (de facto) standards. The PIR should address whether technical requirements were sufficient to fully realize the required – and desired – functionality of key hardware and software components of the system, and of the system as a whole. The point is to discuss whether the system works as *specified*.

The PIR should also address whether the system works as *intended* by management and/or users. If it does not, this may be due to insufficient requirements, engineering trade-off, cost, complexity of the technical problem, etc. These reasons need to be captured because they indicate that some technical specifications may need to be tightened, or that they need to be used in combination with other factors. Comments from system users are a critical part in establishing whether the system really works as intended: if there is no user support, the positive aspects of meeting specification are diluted.

d) Benefits: The benefits section is not a repetition of the agency's cost/benefit analysis. Since the project was funded through implementation, it is assumed that there were projected benefits. Rather, the PIR documents whether the projected benefits match the actual benefits as a result of the project's implementation. Benefits need not be defined in terms of cost savings or cost avoidance. They may include "public good" (e.g., enhanced safety), increased agency throughput for workload, enhanced agency capability for additional responsibilities, future potential of the system or agency, consistency with the technical direction of the state, agency, and industry, or lessons learned by the agency in meeting its technical goals.

Sample Post Implementation Review (PIR) Table of Contents

I. Executive Summary
II. Background
III. Project Goals and Objectives
IV. PIR Measurement Criteria
- Estimated and Actual Schedule
- Estimated and Actual Costs
- Expected and Actual Functionality
- Projected and Actual Benefit

V. Lessons Learned
a) Solicitation Process and Vendor Selection
b) Contract Negotiation and Management
c) Technology
d) Project Management
e) Communications Plan
f) Technical Design Specifications
g) Data Conversion
h) Testing
i) Training
j) Implementation
k) Production / Operations

Appendix
Final QA Report